10) Caring For Your In-Wall Speakers

The two most common ways that in-wall speakers are permanently damaged:

1) Not enough power at higher volumes.
2) Too much power at higher volumes.

Contrary to conventional wisdom, far more speakers are damaged as a result of underpowering, than by overpowering. When a receiver runs out of power, it still tries to reproduce the musical signal by "clipping" the waveform. At loud volumes, this clipping introduces gross amounts of distortion to the speaker, eventually destroying it. If the sound from your in-wall speakers starts to sound distorted, turn down the volume.

Having plenty of reserve power will help your speakers reproduce dynamic contrasts and quick transients of music much more effectively. But you do have to exercise good judgement; too much power will also permanently damage a speaker. Again, if you hear distortion, turn the volume down.

Specifications

Model number	CS620W
Woofer	6.5" poly cone
Tweeter	1" Mylar
Frequency response (Hz)	50-20,000
Dimensions H x W x D (in)	12" x 8-1/2" x 3-1/2"
Cut-out size H x W (in)	10-3/4" x 7-1/4"
Power handling (RMS/Peak)	50/100
Impedance	8 ohm
SPL (1W/1m)	89 dB

Warranty Information

Dayton Audio products are constructed by industry experts, and are thoroughly tested before shipment. Dayton Audio products are warranted for the period of one year. This warranty is limited to manufacturer defects, either in materials or workmanship. Dayton Audio is not responsible for any consequential on inconsequential damage to any other unit or component or the cost for installation or extraction of any component of the audio system. In the rare case of a product failure, please contact your place of purchase or call our Customer Support Department at (937) 743-8248.

Warranty Limitations

There are no other warranties, either express or implied, which extend the foregoing, and there are no warranties of merchantability or fitness for any particular purpose. The warranty will not cover incidental or consequential damage due to defective or improper use of products. This includes but is not limited to burnt voice coils, overheating, bent frames, holes in the cone, or broken lead wires.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Non-Warranty Service: If non-warranty service is required, the product may be sent to the Company for repair/replacement, transportation prepaid, by calling (937) 743-8248 for details, complete instructions, and service fee charges.

DAYTON AUDIO

daytonaudio.com
tel + 937.743.8248
info@daytonaudio.com

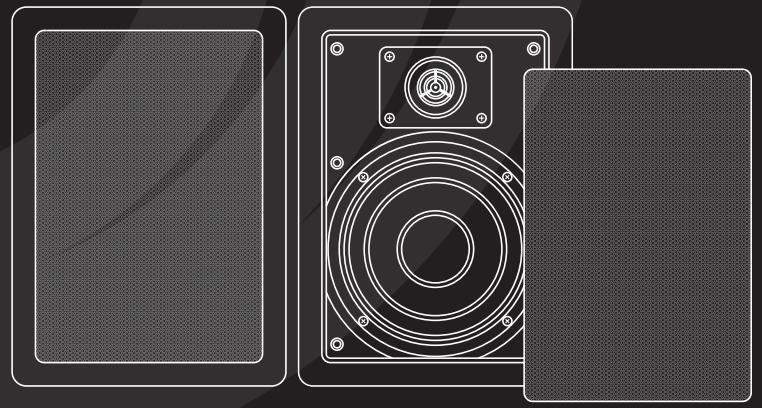
705 Pleasant Valley Dr.
Springboro, OH 45066
USA

DAYTON AUDIO

CONTRACTOR SERIES

In-Wall Speaker

Models: CS620W User Manual



Congratulations on the purchase of your Dayton Audio® Contractor Series In-Wall Speaker System. These speakers were manufactured with high quality components and engineered to deliver superior sound performance.

Like many of the products sold by Dayton Audio®, these in-wall speakers were designed for ease of installation.

Please read through the instructions completely before you begin your installation.

1) Parts Inventory

Your In-Wall kit should include the following:

- 1 pair of Dayton Audio® In-Wall Speakers with Grills
- 2 metal retrofit brackets
- 1 package of hardware
- 1 pair of cardboard mounting/paint masking templates

2) Installation Tools

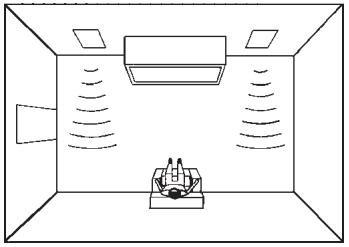
The Dayton Audio® In-Walls can be installed with the following simple tools which you supply:

- Pencil
- Masking tape
- Drill & drill bits
- Utility knife
- Keyhole saw*
- #2 Phillips screwdriver
- Wire cutters & wire strippers
- Small level**
- Stud finder**

** Recommended for use if installing in plaster walls.*

*** Optional tools to make the installation easier.*

3) Speaker Location

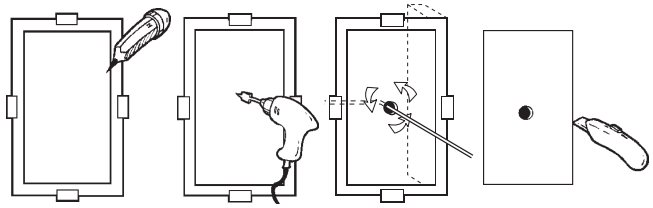


To achieve the best performance from your Dayton Audio® speakers, it is important to carefully select the location for installation.

Your in-wall speakers should be installed 5 to 8 feet apart to ensure proper stereo imaging. If possible, mount each speaker the same distance from the corners on a common wall. Keep the speakers at least 2 feet away from the corners of the room to avoid overemphasized bass reproduction.

The speakers should be located so that the tweeter height is at the same level, or slightly above the listener's ear. You must now decide whether the primary listening will be done standing or in a seated position. Remember, for the best stereo imaging, the listening position should be directly in-between the speakers with the tweeters at ear level.

4) Speaker Installation



Once you have selected the location for your speakers, you are now ready to install them.

CAUTION: Be certain that there are no electrical wires, water pipes, or heating ducts in the planned installation area before you start drilling or cutting into the wall. If there is an electrical outlet nearby, turn off the circuit breaker to avoid possible injury.

The in-wall speakers are designed to be mounted to the wall area between the studs. Once you have selected your location, the next step is to be sure you are between the studs. By tapping on the wall, you will hear a hollow sound when between two studs and a sharper, more solid sound when right on top of, or close to a stud.

An easier, more accurate method for finding the location of wall studs is to use a stud finder.

Once you have established that your chosen location is between two studs and that there are no obstructions in the wall, tape your speaker template to the wall and lightly trace around the inside opening with a pencil. To ensure that your speaker template is straight, you may want to use a level before you mark the wall.

Drill a 1" hole in the center of the template outline. Next, using a piece of stiff wire (a coat hanger works well), bend it 8" from the end at a 90 degree angle. Insert the bent part of the coat hanger into the 1" hole and rotate the wire in a complete circle to check for obstructions. If the wire hits a stud on either side, reposition your template to the left or right and re-do the light pencil outline. Keep the pilot hole within the template outline.

If the walls are made of drywall, simply cut the marked area with your utility knife. If your home has plaster walls, then you will need to drill pilot holes at the four corners of the template outline, and cut the speaker opening using a keyhole saw.

Check the speaker opening by placing one of the speakers into the hole. The speaker should fit loosely into the hole.

Repeat these steps for the other speaker.

5) Speaker Cable

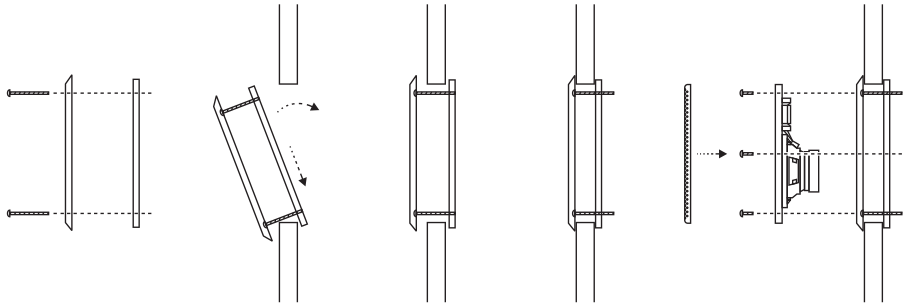
Don't compromise sound quality by using thin, inexpensive speaker wire, we recommend using a high quality oxygen free copper speaker cable. For runs less than 50 feet we recommend 16 gauge cable, and for longer runs we recommend 14 gauge or larger cable. Most municipalities require the use of CL2 rated speaker cable for installation in walls and ceilings. Leave enough speaker cable so you can stand comfortably on the floor or ladder while connecting the speaker cable to the speakers.

6) Speaker Connection

Remove about 8" of the cable jacket to expose the inner conductors. Strip 1/4" of insulation from each conductor and connect to the speaker terminals. When connecting the wires to the speakers, be sure to observe proper polarity. Most CL2 rated speaker cable will have red and black conductors so you will connect the red wire to the red speaker terminal and the black wire to the black speaker terminal.

7) Final Installation

To install the speakers into the wall, first put the bottom of the mounting bracket into the cutout so that the bracket is behind the wall. Push the top of the mounting bracket in the hole so that the upper part of the bracket is inside the wall. Next, position the mounting bracket so that it sits in the center of the cutout. Before tightening the screws, use a level to align the mounting bracket. Tighten the screws evenly in a clockwise pattern until the mounting bracket is secure. Install the speaker and baffle into the mounting bracket. Replace the grills and your installation is complete.



8) Painting Speakers

If the speaker frame is to be painted, either before or after installation, use the "Paint Masking Template" to cover the woofer/tweeter assembly to prevent damage to them. **Do not try to paint the frame and grill assembly together.** The grill should always be painted separately. Do not put such a heavy coat of paint on the grill that the perforations are blocked.

9) Troubleshooting

Should your speakers not work properly, check the following:

No sound from speakers:

- Most stereo receivers have an A/B speaker selector switch. Make certain that this switch is in the proper position.
- Mute feature is activated.

One speaker is playing while the other is not:

- Check the balance control on the receiver. Make sure it is centered.
- Loose connection at either the receiver or the speaker. Double check connections.
- Bad speaker cable. Replace suspect speaker wire.

Receiver cuts on and off:

- This could be caused by a short circuit between the positive and negative leads. Check the connections at the back of the receiver, and then at the speaker. Make sure that no strands of wire from one connector are touching the other connector.